

AGRICULTURE & LAND USE



LESS THAN 8% OF CANADA'S LANDMASS IS USED FOR AGRICULTURE.¹

Other land is not available for food production because it has been developed for residential or commercial purposes, or is shrubland or forested. Often terrain that is too rocky, hilly or is otherwise unsuitable for cropland can be grazed by farm animals (**livestock**).



JUST OVER 40% OF AGRICULTURAL ACRES IN CANADA ARE USED FOR LIVESTOCK PRODUCTION.²



Lentil field



GROWING CANADIAN CROPS



IN 2016 CROPLAND ACCOUNTED FOR 58.8% OF TOTAL FARM AREA.³

Even with such a small proportion of Canada's land base contributing to growing food, Canada is a world leader in the production of many agricultural crops, including wheat (and other cereals), pulses (sources of plant protein), oilseeds (canola and mustard) and soybeans.

Canadian farmers have adopted techniques that are improving how we use available agricultural land more efficiently:⁴

- **Significantly reducing the amount of summer fallow** (the practice of letting land rest for a growing season and turning over soil - or **tilling** it - to control weeds), and using **no-till** or **conservation tillage** to preserve soil moisture, increase soil organic matter while preventing soil erosion caused by wind and water.
- **Precision agriculture**, involving the precise placement of seed, fertilizer and other products, has resulted in less waste and the ability to grow more food on less land.
- **Genetically engineered (GE) crops**, often called **GMOs**, designed to resist weeds and insects, means using less pesticide and results in greater production (yields). Without these technologies, we would need almost 50% more land to grow the same amount of food as we do now.⁵



Canada is a world leader in food production.



CROPS AND LIVESTOCK WORK TOGETHER

Farmers are continually balancing how to use agricultural resources (like land) more efficiently and prevent waste.

Examples include:



Livestock feed

- **Using by-products of food and industrial processing** like distillers grains⁶ (waste from brewing and ethanol production), canola and soybean meal (what is left after oil has been separated), cereal grains (such as barley that do not make the grade for production of beer or flour), or beet pulp (fibrous by-product after sugar is extracted from beets) to feed to farm animals
- **Feeding livestock grains damaged by insects, disease, frost or drought**
- **Allowing ruminants (e.g., cattle, goats, sheep) to graze land that is suitable only for growing grass or forages (crops grown to feed livestock).** Much of the land cattle graze is part of a delicate ecosystem with marginal (low quality) soils that cannot produce quality crops. Of the total cropland in Canada, less than 9% is used to grow feed for cattle⁸
- **Using crop rotations to preserve soil nutrients.** Crops like alfalfa or soybeans are nitrogen fixing (take nitrogen from the air and convert it to a form the plant can use, depositing it into the soil) and improve the quality of soil for subsequent crops. Even though humans may not eat what is harvested, e.g., soybeans or alfalfa, they are important for soil management and are fed to livestock after harvesting



Fertilizer and seed are placed at precise locations and depths.

THREE CHEERS FOR FERTILIZER!

To be able to produce food for a growing world population, rather than increasing land base, we need to increase production, or **yields**. Better future global crop yields are expected to come from increased **productivity** or the ability to grow more food on less land – with fertilizer playing a key role in ensuring that the nutrient requirements of crops are met.⁹

Across Canada, farmers have substantially reduced the negative effects of fertilizers by:



- Increasing accuracy in fertilizer applications by selecting the right fertilizer at the right rate, the right time and in the right place¹⁰
- Using farm equipment that can apply fertilizer and manure with greater precision

The threat to agricultural land in Canada

Urban expansion has increasingly resulted in the loss of prime farmland because many growing Canadian cities were originally established on fertile agricultural land. As the trend towards greater urbanization continues more agricultural land is expected to be taken out of production.^{11,12}

Many acreages are also built on what was originally farmland. They reduce urban density, but contribute to the loss of land available to grow food.

